CLAIMS

1. A system for assembling an application for processing image or image-derived data, comprising:

a base operator configured to interface with one or more derivative operator classes, each operator class including an operator object for executing a processing function on the image or image-derived data; and

a base multiport node class configured to provide a multiport node for each operator object, the multiport nodes instantiating a pluggable operator for connecting the multiport nodes together at runtime according to user-defined parameters, and wherein the connection of multiport nodes implements the processing functions of the operator objects to execute the application.

2. The system of claim 1, wherein each multiport node includes N inputs and M outputs, each input and output having a connection with at least one other multiport node.

3. The system of claim 1, wherein the pluggable operator includes a pointer to an operator object.

4. The system of claim 1, wherein the pluggable operator is an class derived from the multiport node.

5. The system of claim 3, wherein the pluggable operator is configured to call the operator object.

6. The system of claim 3, wherein the pointer is based on the user-defined parameters.

7. The system of claim 6, wherein the user-defined parameters are dynamically definable at run time of the application.

8. The system of claim 7, wherein the pluggable operator is configured to adapt the pointer array to changes in the user-defined parameters.

9. The system of claim 8, wherein each multiport node is configured to adapt to changes in the pointer array.

10. The system of claim 9, wherein the base operator interface is configured to enable more or less operator classes at runtime.

11. A method of assembling an application for processing image or image-derived data, comprising:

providing a base operator having an interface for interacting with one or more derivative operator classes, each operator class including an operator object for executing an processing function on the image or image-derived data;

providing a base multiport node configured to provide a multiport node for each interacting operator object; and

connecting the multiport nodes with a pluggable operator instantiated by the multiport nodes.

12. The method of claim 11, wherein the pluggable operator includes a pointer to an operator object.

13. The method of claim 12, wherein the pointer is configured according to a set of user-defined parameters specified by the base operator.

14. The method of claim 11, wherein the connection of the multiport nodes defines the application.

15. The method of claim 14, further comprising receiving user-defined parameters at runtime of the application.

16. The method of claim 13, further comprising reconfiguring the connections of the multiport nodes according to user defined parameters received at runtime of the application.

17. The method of claim 12, wherein connecting the multiport nodes is based on the user-defined parameters.

18. The method of claim 11, wherein each multiport node includes N inputs and M outputs.

19. The method of claim 18, wherein each input and output of each multiport node is connected to at least one other multiport node.

20. The method of claim 11, further comprising reconfiguring the application with at least one new operator object at runtime of the application.